

REMARKS

The above amendments and these remarks are responsive to the non-final Office action dated March 15, 2007. Claims 1–35, 50, and 51 are pending in the application. In the Office action, the Examiner indicated that claims 30, 31, and 33 would be allowable if rewritten in independent form, and rejected each of the remaining claims (except claim 3) as follows:

- Claims 1, 2, 5–10, 28, 34, and 35 were rejected provisionally for nonstatutory obviousness-type double patenting over claims 35–42, 46, 49, and 55 of copending U.S. Patent Application Serial No. 10/717,402;
- Claims 1, 2, 4–7, 9–15, 17, 18, 20–27, 50, and 51 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,440,135 to Orbay et al. (“Orbay”);
- Claims 28, 29, 32, and 35 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,604,414 to Borges (“Borges”); and
- Claims 8, 16, 19, 28, 29, 32, 34, and 35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Orbay in view of U.S. Patent No. 6,383,186 to Michelson (“Michelson”).

Applicant traverses the rejections, contending that all of the pending claims are patentable over the cited references. Nevertheless, to expedite the issuance of a patent, and to more particularly point out and distinctly claim aspects of the invention that applicant wants to patent now, applicant (1) has canceled claims 29 and 30, without prejudice; and (2) has amended claims 1, 11, 17, 28, and 31–33. However, applicant reserves the right to pursue the subject matter of any of the canceled and/or amended claims, in original or previously presented form, at a later time. Furthermore, in view of the amendments above and the remarks below, applicant respectfully requests reconsideration of the application and prompt issuance of a Notice of Allowability covering all of the pending claims.

I. Amendments to the Claims

The present communication amends claims 1, 11, 17, 28, and 31–33. The amendments to the claims are supported fully by the application. Exemplary support (and/or an explanation) for each claim amendment is included, without limitation, in the following table:

<i>Claim(s)</i>	<i>Exemplary Support (and/or Explanation)</i>
1, 11, and 17 (Independent)	Figure 5; Page 12, lines 3-17
28 (Independent)	Claims 29 + 30 (Amended to incorporate subject matter of allowable claim 30 and intervening claim 29)
31–33	(Address formal matters created by the amendments to claim 28)

II. Claim Rejections – Double Patenting

The Examiner provisionally rejected claims 1, 2, 5–10, 28, 34, and 35 for nonstatutory obviousness-type double patenting over claims 35–42, 46, 49, and 55 of copending U.S. Patent Application Serial No. 10/717,402. However, the present communication directly or indirectly amends each of the provisionally rejected claims, via amendment of independent claims 1 and 28, thereby rendering the double patenting rejections moot.

III. Claim Rejections – §§ 102 and 103

The Examiner rejected each of claims 1, 2, 4–29, 32, 34, 35, 50, and 51 as being anticipated by Orbay or Borges and/or as being obvious over Orbay in view of Michelson. Applicant traverses these rejections, contending that none of the cited references, taken alone or in combination, teaches or suggests every element of any of

the rejected claims. Nevertheless, for the reasons set forth above, applicant has amended each of independent claims 1, 11, 17, and 28. The pending claims are patentable for at least the reasons set forth below.

A. Claims 1–10, 50, and 51

Independent claim 1 is directed to a method of bone fixation and, as amended, reads as follows:

1. (Currently Amended) A method of bone fixation, comprising:
 - placing respective first and second fasteners through an opening and a slot of a bone plate and into a first portion of a bone having a discontinuity flanked by the first portion and a second portion of the bone, so that the first and second fasteners **are fixed relative to each other and** cooperate with the opening and the slot to define a permitted range of **generally in-plane** motion for the bone plate;
 - securing the bone plate to the second portion of the bone;
 - adjusting an angular disposition of the bone plate **within the permitted range and** relative to the first portion of the bone after the steps of placing and securing, thereby adjusting a relative disposition of the first and second portions of the bone; and
 - fixing the angular disposition of the bone plate relative to the first portion of the bone.

Claim 1 was rejected in the Office action as being anticipated by Orbay. However, Orbay does not teach or suggest every element of claim 1. For example, Orbay does not teach or suggest “adjusting an angular disposition of the bone plate within the permitted range” defined (1) by first and second fasteners that are fixed relative to each other and (2) by an opening and a slot of the bone plate through which the first and second fasteners have been placed.

Orbay relates to a volar fixation system with stabilization pegs. An example of the system, volar fixation system 100, is shown in Figure 2, which is reproduced here to facilitate review.

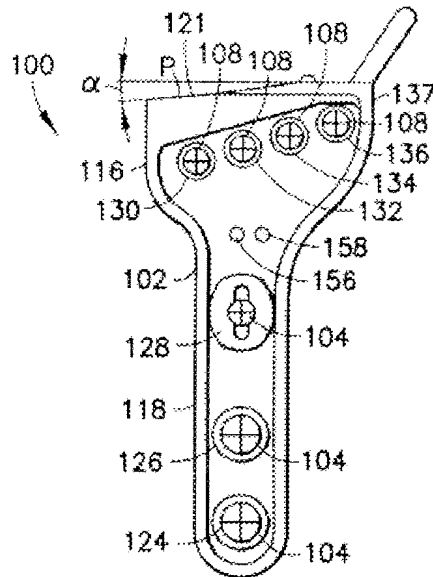


FIG. 2

System 100 includes a bone plate 102 for placement against the volar side of the radius bone. Bone plate 102 includes a head portion 116 extending from a body portion 118. Each of the head and body portions defines a series of circular openings for receiving pegs or screws that couple the bone plate to the radius bone. In particular, head portion 116 defines peg holes 130-136 for receiving pegs 108, and body portion 118 defines countersunk screw holes 124 and 126 for receiving bone screws 104. The bone plate has only one elongate opening or slot, namely, countersunk screw hole 128. Orbay further discloses embodiments in which each peg can be articulated through a range of angles within each respective peg hole and then fixed at a desired angle within the range.

Orbay does not teach or suggest adjusting an angular disposition of the bone plate after placing first and second fasteners through the bone plate and into bone so that the fasteners are “fixed relative to each other,” as recited in part by amended claim 1. In the Office action, the Examiner asserted that Orbay discloses “adjustment of the fractured bones under the plate” and that “the claimed method steps are inherently performed during use of” Orbay's device. Applicant disagrees because any alleged adjustment of the bone plate of Orbay is not disclosed to occur with first and second fasteners fixed relative to each other. Even further, the step of adjusting recited by claim 1 cannot be performed with the bone plate of Orbay. In particular, oval opening 128 (the only slot) of Orbay's bone plate extends generally toward each of the other openings/holes of the bone plate. As a result, no matter which circular opening is selected to receive a screw/peg, the bone plate of Orbay is restricted from in-plane motion with first and second fasteners placed through the selected circular opening and slot 128 of the bone plate and fixed relative to each other.

In summary, Orbay does not teach or suggest every element of amended claim 1. As a result, claim 1 should be allowed. In addition, claims 2–10, 50, and 51, which depend from claim 1, also should be allowed for at least the same reasons as claim 1.

B. Claims 11–16

Independent claim 11 is directed to a method of bone fixation and, as amended, reads as follows:

11. (Currently Amended) A method of bone fixation, comprising:
- placing a first fastener through a first slot of a bone plate and into a first portion of a bone having a discontinuity flanked by the first portion and a second portion of the bone;
 - moving the bone plate along a path defined cooperatively by the first fastener and the first slot to adjust a translational disposition of the bone plate relative to the first portion;
 - introducing a second fastener through a second slot of the bone plate and into the first portion of the bone **such that the first and second fastener are fixed relative to each other;**
 - adjusting an angular disposition of the bone plate relative to the first portion of the bone after the steps of placing, moving, and introducing, by movement of the bone plate within a permitted range of **generally in-plane motion of the bone plate** defined cooperatively by the fasteners and the slots;
 - securing the bone plate to the second portion of the bone; and
 - fixing the angular disposition of the bone plate relative to the first portion of the bone.

Claim 11 was rejected in the Office action as being anticipated by Orbay. However, Orbay does not teach or suggest every element of claim 11. For example, and for at least the same general reasons as those presented above in relation to claim 1, Orbay does not teach or suggest “adjusting an angular disposition of the bone plate” by “movement within a permitted range of generally in-plane motion of the bone plate” defined, in part, by first and second fasteners that are fixed relative to each other. Claim 11 thus should be allowed. In addition, claims 12–16, which depend from claim 11, also should be allowed for at least the same reasons as claim 11.

C. Claims 17–27

Independent claim 17 is directed to a method of bone fixation and, as amended, reads as follows:

17. (Currently Amended) A method of bone fixation, comprising:
- selecting a bone plate defining an opening and a guide slot;
 - connecting the bone plate to a bone by placing respective first and second fasteners through the opening and the guide slot and into the bone so that the bone plate has an angular disposition relative to the bone;
 - adjusting the angular disposition by moving the bone plate along a path permitted by relative travel of the second fastener along the guide slot **while the first and second fasteners are fixed relative to each other**; and
 - restricting additional movement of the bone plate relative to the bone to fix the angular disposition.

Claim 17 was rejected in the Office action as being anticipated by Orbay. However, Orbay does not teach or suggest every element of claim 17. For example, and for at least the same general reasons as those presented above in relation to claim 1, Orbay does not teach or suggest “adjusting the angular disposition by moving the bone plate along a path permitted by relative travel of the second fastener along the guide slot and while the first and second fasteners are fixed relative to each other.” Claim 17 thus should be allowed. In addition, claims 18–27, which depend from claim 17, also should be allowed for at least the same reasons as claim 17.

D. Claims 28 and 31–35

Claim 28 was rejected as being anticipated by Borges and as being obvious over Orbay in view of Michelson. Applicant traverses the rejections, contending that claim 28 is patentable over the cited references taken alone or in combination. Nevertheless, for the reasons set forth above, applicant has amended claim 28 to correspond to claim 30

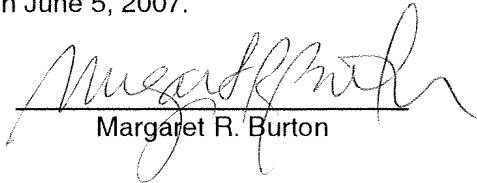
rewritten in independent form, which was indicated to be allowable in the Office action. Accordingly, claim 28, as amended, should be allowed. In addition, claims 31–35, which depend from claim 28, also should be allowed for at least the same reasons as claim 28.

IV. Conclusion

Applicant submits that all of the pending claims are patentable over the cited reference. Accordingly, applicant respectfully requests that the Examiner issue a Notice of Allowability covering all of the pending claims. If the Examiner has any questions, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned attorney of record, or his associate Stan Hollenberg (Reg. No. 47,658), both at (503) 224-6655.

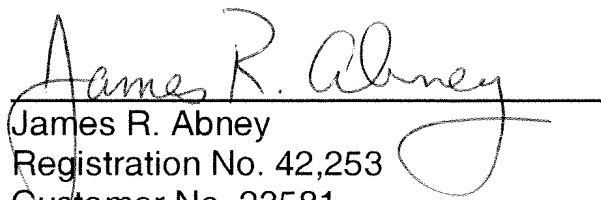
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